

CLAIMS:

- sub B7A
B7C
D1⁵
1. Apparatus for automatically counting used surgical sponges and determining the amount of blood contained in the surgical sponges, comprising:
- (a) a container for containing used surgical sponges, the container having an opening through which used surgical sponges enter the container;
- (b) detecting means for detecting a surgical sponge entering the container through the opening;
- 10 (c) first display means for displaying the number of sponges which have entered the container through the opening since a predetermined time;
- (d) determining means for automatically determining the approximate dry weight of a sponge entering the container
- 15 through the opening;
- (e) weighing means for weighing the contents of the container;
- (f) calculating means for automatically calculating the approximate amount of body fluids which has entered the
- 20 container through the opening since a predetermined time; and
- (g) second display means for indicating the approximate amount of body fluids contained in all sponges which have entered the container means through the opening since a predetermined time.
- 25 2. The apparatus of claim 1, wherein:
the detecting means comprises a non-optical scanner means.
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B7C
D1⁵
3. The apparatus of claim 2, wherein:
the non-optical scanner means can read an indicating
- 30 means on the sponges even when the indicating means is covered with blood or other body fluids.
4. The apparatus of claim 1, further comprising:
disposable bag means for receiving sponges which enter the container through the opening;
- 35 access means for allowing access to the disposable bag means to allow removal of the disposable bag means.
5. The apparatus of claim 1, further comprising:
first alarm means for indicating when a predetermined number of sponges is contained in the container.
- 40 6. The apparatus of claim 1, wherein:
the first display means includes means for indicating the number of each different type of sponge which has entered the container means through the opening since the predetermined time.
- 45 7. The apparatus of claim 1, further comprising:
a battery for powering electronic components in the container;

a visible battery gauge;
an alarm means for indicating when the battery power is low; and

an indication of remaining battery life.

5 8. The system of claim 1, wherein:

the second display means indicates, with an accuracy of $\pm 0.1\%$, the exact amount of body fluids contained in the sponges which have entered the container since the predetermined time.

10 9. The apparatus of claim 1, further comprising:

memory means containing the weight of various sponges to be used with the apparatus.

10. A system for facilitating counting of surgical sponges and determining the approximate amount of body fluids contained therein, comprising:

15 (a) a plurality of sponges of varying weights, each sponge having a dry weight before being used to absorb fluids and an indicating means thereon for indicating the dry weight of the sponge, the dry weight of the sponge including the weight of the indicating means;

20 (b) a device for counting the surgical sponges and determining the approximate amount of body fluids contained therein, comprising:

(b1) a container means for containing the surgical sponges,

25 (b2) an opening in the container means above a receptacle means for receiving the surgical sponges;

(b3) scanner means for detecting when one of the surgical sponges passes through the opening;

30 (b4) detecting means for automatically determining the dry weight of the surgical sponges which have passed through the opening since a predetermined time by detecting the indicating means on the sponges;

35 (b5) calculating means for automatically determining the approximate amount of body fluid contained in the surgical sponges which have entered the container since a predetermined time by subtracting the dry weight of the sponges from the weight of the sponges including the body fluids;

40 (b6) first display means for displaying an indication of the approximate amount of body fluid contained in the surgical sponges which have entered the container since a predetermined time;

45 (b7) determining means for automatically determining the number of surgical sponges which have entered the container since a predetermined time; and

(b8) second display means for displaying the number

of surgical sponges which have entered the container since a predetermined time.

11. The system of claim 10, wherein:

different types of surgical sponges are received by the
5 container, and

the detecting means is capable of distinguishing between multiple types of surgical sponges, even those sponges of different types but similar weights,

the second display means displays the number of each type
10 of sponge which is received.

12. The system of claim 10, wherein:

the first display means indicates, with an accuracy of +/- 0.1%, the exact amount of body fluids contained in the sponges which have entered the container since a predetermined
15 time.

13. The system of claim 10, wherein:

the detecting means comprises a non-optical scanner means.

14. The system of claim 13, wherein:

the non-optical scanner means can read an indicating means on the sponges even when the indicating means is covered with blood or other body fluids.

15. A surgical sponge made of an absorbent material for absorbing fluids during surgery and having a dry weight before
25 being used to absorb fluids and an indicating means thereon for indicating the dry weight of the sponge, the dry weight of the sponge including the weight of the indicating means, the indicating means being readable by a non-optical scanner means.

16. The surgical sponge of claim 15, wherein:

the indicating means also indicates the type of sponge on which it is located.

17. The surgical sponge of claim 15, wherein:

the indicating means comprises a RF tag attached to the
35 sponge.

18. The surgical sponge of claim 17, wherein:

the RF tag does not exceed one inch in diameter and 0.20 inches in thickness.

19. The surgical sponge of claim 18, wherein:

the RF tag does not exceed three grams in weight.

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